

# DAC-HA200 D/A Converter and Headphone Amplifier



## Reference Hi-Fi Goes Portable

The first practical and portable DAC/amp to provide a direct-digital connection to your iPod touch®, iPhone®, or iPad®, the DAC-HA200 brings high-resolution D/A conversion and premium Onkyo amplification to all the headphones in your collection. As well as connecting Lightning-equipped iOS devices, the USB-A input supports AOA 2.0-compliant Android devices for CD-quality sound, while a USB Micro-B input links to PC and Mac. When connected via USB, your DAC-HA200 offers free access to the Onkyo HD Player Pack app, allowing you to load your iOS device with 96/24 and 5.6 MHz DSD albums and to personalize the sound with a 16,384-band equalizer. The compact aluminum amp is loaded with proven technology, including a Burr-Brown PCM5102 D/A converter, MUSES 8920 op-amp, and a discrete Class AB push-pull output stage. As you would expect from a company that's been handcrafting hi-fi equipment since 1946, audio performance is extraordinary—a vital, energetic, and engaging listen on headphones of any kind. In your pocket or on the desktop, the DAC-HA200 is a must-have for any music lover that's serious about discovering how good a portable setup can sound.

### FEATURES

- Portable High-Resolution Digital-to-Analog Converter and Headphone Amplifier for iOS Devices\*<sup>1</sup> with Lightning Connector and AOA 2.0-Compliant Android Devices\*<sup>2</sup> via USB A-type Input
- Asynchronous High-Resolution D/A Converter for PC, Mac, and Android via USB with High-Precision Clock to Reduce Jitter and Digital Noise\*<sup>3</sup>
- Free Access to HD Player Pack When Connected to iOS Devices via USB (Onkyo HF Player App Must Be Installed)
- HD Player Pack Supports High-Resolution Digital Audio Output from iOS Devices (Including 96 kHz/24-bit FLAC, WAV, ALAC, and 5.6 MHz DSD\*<sup>4</sup>)
- HD Player Pack Enables 16,384-band HD Equalizer with Memory Presets
- 96 kHz/24-bit-Capable Optical Input Supports Digital Audio from Compatible Devices
- TI Burr-Brown PCM5102 DAC for Clear and Accurate Sound
- MUSES 8920 Op-Amp with Discrete Low-Distortion Push-Pull Output Circuitry
- High Output Power and Selectable Two-Stage Gain for 8–600 Ω Headphones
- Up to Approx. 11 Hours Battery Life (via Audio IN) with 8-Hour Recharging via Supplied USB-A/DC Input Cable
- ErP2-Compliant Power-Saving Feature Shuts Down Device After 30 Minutes with No Input Signal
- Optical/Analog Switching Input for iPod®/iPhone®/iPad® with 30-pin Connector and Other Portable Audio Players
- Easily Adjustable Volume Control Knob with Bump Protection
- Compact, Lightweight, and Stylish Aluminum Body
- Includes USB Micro-B Input and Cable for Mac/PC Connection, DC Input to USB-A Charging Cable, and Rubber Bands for Attachment to Media Player

\*1 Certified for iPhone 5s, iPhone 5c, iPhone 5, iPad Retina (4th Generation), iPad Air, iPad mini, iPad mini Retina, and iPod touch (5th Generation). \*2 Maximum output resolution for Android devices with AOA 2.0 is 48 kHz at 16-bit depth (Android 4.1 and later). \*3 Connection to computer via USB is supported by Windows Vista, Windows 7, Windows 8, Windows 8.1, OS X Snow Leopard 10.6.4 or later, OS X Lion, OS X Mountain Lion 10.8, and OS X Mavericks 10.9. Functionality with other operating systems is not guaranteed. \*4 DSD-IFF and DSF formats are converted to PCM before playback.

# DAC-HA200 D/A Converter and Headphone Amplifier

## A Fully Portable Hi-Res DAC and Amp for iOS

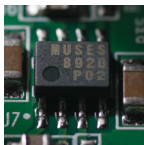
The DAC-HA200 is the first headphone DAC/amplifier to enable direct-digital connection to your Lightning-equipped iOS device via USB. Just plug your iPhone®, iPod touch®, or iPad® into the USB-A input on the amp using a regular Lightning cable, access your free Onkyo HD Player Pack app, and experience your 96 kHz/24-bit FLAC, WAV, and 5.6 MHz DSD albums with premium digital-to-analog conversion and Onkyo amplification. The depth and clarity of high-resolution music is yours to enjoy anywhere, anytime, and best of all, you're free to use your phone or tablet as you listen.

## Enjoy Lossless Audio from Android

Connect your AOA 2.0-compatible Android device to the USB-A input to experience CD-quality direct-digital audio on the go, with the DAC-HA200 performing D/A conversion via asynchronous USB transfer. The amp is capable of receiving and amplifying digital music stored on Android phones and tablets to a maximum of 48 kHz/16-bit resolution, and you can continue to use your phone for other things while you bask in premium hi-fi sound.

## The Power and Energy of Onkyo Amplification

Onkyo has more than 65 years experience building some of the best-sounding hi-fi audio equipment in the world. This heritage is clear the moment you plug your headphones in to the DAC-HA200. A classic MUSES 8820 op-amp is married to discrete push-pull output stage circuitry (not a cheap integrated circuit) for exceptionally low distortion and high driving power. The result is detailed, energetic, and deeply enjoyable sound reminiscent of a quality hi-fi component system.



## Premium Asynchronous D/A Conversion

While the DAC inside your smartphone or PC is fine for casual listening, a decent pair of headphones will quickly reveal its limitations. The DAC-HA200 features a TI Burr-Brown PCM5102 two-channel DAC, a high-quality chip used regularly in hi-fi equipment for its low out-of-band noise performance and high resistance to jitter. Connect the DAC-HA200 to your Mac, PC, or Android device via USB, and the PCM5102 takes over both the clocking (signal timing) and D/A conversion, opening out the sound and uncovering layers of detail previously obscured by high-frequency noise.

## Free Access to HD Player Pack for iOS

When you connect your DAC-HA200 to iOS devices equipped with Onkyo's HF Player application using a USB cable, you receive free access to HD Player pack for as

long as you remain connected. Normally an optional in-app purchase, HD Player Pack allows you to load high-resolution audio files onto your iOS device and output them to the DAC-HA200 via the digital output. Now you can enjoy 96 kHz/24-bit FLAC, WAV, and ALAC files as well as Double DSD\* anywhere you want, complete with free access to HD Player Pack's 16,384-band FIR equalizer. You can tailor the sound by genre, band, or to individual tracks and save EQ presets for later recall.

\* DSD-IFF and DSF formats are converted to PCM before playback.

## Drive High-Impedance Headphones with Selectable Gain Feature

This powerful, high-quality headphone amplifier works its magic on all the headphones in your collection. A two-stage selectable gain function lets you drive everything from low-impedance IEMs when you're out and about to full-sized dynamic headphones when you're at home or in the office.

## Combined Digital and Analog Switching Input

A single input handles both digital and analog signals from connected devices, automatically detecting the signal type. Digital-to-analog conversion is also performed by the DAC-HA200 when connected to media players with a digital-out function.

## Up to 11 Hours Playback on the Go

The DAC-HA200 returns approximately 11 hours of playtime when using Audio IN connection, making it one of the longest-lasting DAC/amp devices on the market. You can recharge in eight hours using the supplied DC to USB cable and a PC.

## Tough, Compact, and Stylish

Although it's small and lightweight, the DAC-HA200 is based around a very durable aluminum body. It's easy to use when you're on the move with a large knurled volume control, positive-action gain switch, and handy status LEDs. Keep it in your shoulder bag and be free to use your smartphone as you play music via USB cable, or use the supplied rubber bands to attach a media player and slip it in your pocket as you cruise the streets, immersed in hi-res audio heaven.

## In Your Pocket or On Your Desktop

With its compact size, hi-res asynchronous digital-to-analog conversion, ample inputs, and rechargeable lithium-ion battery, you can take your music with you anywhere you go. Use the DAC-HA200 with your laptop and a set of on-ear cans at home; plug in a pair of IEMs for the daily commute; and connect a set of quality closed-backs at the office and keep listening while it recharges. In every case, the DAC-HA200 provides stunning new insight into the music that powers your life.

## SPECIFICATIONS

### Amplifier Section

Power Output	145 mW + 145 mW (32 $\Omega$ , 1 kHz, 10% THD, JEITA) 60 mW + 60 mW (300 $\Omega$ , 1 kHz, 10% THD, JEITA) 35 mW + 35 mW (600 $\Omega$ , 1 kHz, 10% THD, JEITA)
THD+N (Total Harmonic Distortion + Noise)	0.003% (32 $\Omega$ , 1 kHz, 100 mW + 100 mW)
Frequency Response	10 Hz–100 kHz (Audio IN)
Max. Input Power	1 Vrms (Audio IN)
Headphone Impedance	8 $\Omega$ –600 $\Omega$

### Connections

Input Terminals	3.5 mm Mini Jack (Optical/Analog Switching), USB A-Type (USB 2.0), USB B-Type (USB 2.0)
Headphone Output	3.5 mm Mini Jack

### General

Battery Operation Time	Approx. 11 Hours (Audio IN, 32 $\Omega$ , 1 mW + 1 mW Output) Approx. 8 Hours (Apple iOS Device, USB-A IN, 32 $\Omega$ , 1 mW + 1 mW Output)
Charging Time	Approx. 8 Hours (Using USB Cable and PC)
Sampling Frequency/Bit Depth	96 kHz/24-bit
Dimensions Excluding Protrusions (W x H x D)	64 x 21.7 x 112 mm (2 1/2" x 4 1/8" x 7/8")
Weight	210 g (7.5 oz)

### CARTON

Dimensions (W x H x D)	170 x 130 x 70 mm (6 11/16" x 5 1/8" x 2 3/4")
Weight	460 g (16.2 oz)

### UPC CODE

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### Supplied Accessories

- DC power supply USB-A cable for recharging via computer
- USB cable for computer connection (USB Micro-B to USB-A connector)
- Rubber band (x2) for media player attachment



DAC-HA200 Front View



DAC-HA200 Rear View

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